A. R. E.
Ministry of Waqfs
The Supreme Council for Islamic Affairs

ISLAM AND SCIENCE
– 3 –

by
Prof. Dr. M. G. El-Fandy
Head of the Committee of Experts

1414 – 1993

Under the Supervision of :
Dr. Muhammad Ali Mahgoub

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IN THE NAME OF ALLAH ALRAHMAN
(THE BENEFICENT) AL-RAHIM (THE MERCIFUL).

1 - THE TRUE PILLAR OF LIGHT

The mission of Prophet Muhammad (prayers and peace be upon him) and the revelation of the Holy Qurân were the most outstanding events in history to offer man justice, liberty and equality, to enrich human culture and to bring forth new dimensions to the study of the universe.

Needless to say that, in order to bring mankind closer and closer to the Great Intellectual Reality concerning the existence of Merciful, dominating and omnipotent Creator, the Holy Qurân urged us to investigate the hidden wonders of nature, and thus to endeavour interpreting the fixed rules and unaltered mechanisms which govern the expanding universe with outstanding precision and extreme exactness!

As mentioned in part (2), materialism essentially means the denial of the "Great Intellectual Reality" which is the basic doctrine in Islam known as "Tawhid", or the belief in the Oneness of Allah. Such denial soon leads to spiritual emptiness which creates confusion, anarchism and instability, due to the hollow void in the initial build up of human psyche.

Needless to say that there is no reason whatever to assume the existence of more than One Creator. This has become quite evident in the age of science, due to the scientifically established uniformity, stability and uniqueness in the build up of the universe.

"Tawhid" and the concepts involving the essentials of human life as particularized in the Holy Qurân, urge people to accept and adopt Islamic values and doctrines which ensure human rights in full fairness.

Similar to the physical laws which are established by science and which act to maintain the existence of natural phenomena, the moral balance of mankind is established by religious standards and values and maintains human nature behaving and acquiring fine character.

Again, the human mind, which designates the human race as occupying the highest rank among beings living on Earth, is part of the Supreme Measure. One can say that it is the reflection of Allah's Light, Wisdom, Perfection, Knowledge, Justice and Omnipotence; the Holy Qurân Says what means :

The Merciful; taught the Qurân; He created man; He taught him the Bayan*; the sun and the moon follow perfectly computed courses; and the seedlings and trees both bow in adoration; and the sky He raised high, and set up the balance (of justice); so do not transgress (due) balance; and establish weight with justice and fall not short in the balance.

- Al - Rahman (1 - 9)-

﴿ الرَّحْمَٰنُ ﴿١﴾ عَلَّمَ الْقُرْآنَ ﴿٢﴾ خَلَقَ الْإِنسَانَ ﴿٣﴾ عَلَّمَهُ الْبَيَانَ ﴿٤﴾ الشَّمْسُ وَالْقَمَرُ بِحُسْبَانٍ ﴿٥﴾ وَالنَّجْمُ وَالشَّجَرُ يَسْجُدَانِ ﴿٦﴾ وَالسَّمَاءَ رَفَعَهَا وَوَضَعَ الْمِيزَانَ ﴿٧﴾ أَلَّا تَطْغَوْا فِي الْمِيزَانِ ﴿٨﴾ وَأَقِيمُوا الْوَزْنَ بِالْقِسْطِ وَلَا تُخْسِرُوا الْمِيزَانَ ﴿٩﴾ ﴾

الرحمن (١ ـ ٩)

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* ability of expression, intelligent speech, capability to understand and interpret well, capacity to grasp knowledge.

We, believers, have thus to operate with standards and values consistent with the law of balance and justice. However, this also means consistency with the reality of our own nature and we are apt to receive Allah's blessing in the hereafter. In other words, we have to endeavour following the righteous path of reality and justice. In such respects the Holy Qurân says, for example what means :

Praise be to Al - Rahman to Whom belongs all that in the heavens and in the earth, and to Him be praise in the Hereafter; He is All Wise All - Gognizant . He knows all that goes into the earth and all that comes out thereof, all that comes down from the sky and all that ascends thereto, and He is the Rahim (Merciful) and the Ghafoor (Forgiving).

- Sabaa (1 - 2) -

﴿ ٱلْحَمْدُ لِلَّهِ ٱلَّذِى لَهُۥ مَا فِى ٱلسَّمَٰوَٰتِ وَمَا فِى ٱلْأَرْضِ وَلَهُ ٱلْحَمْدُ فِى ٱلْءَاخِرَةِ وَهُوَ ٱلْحَكِيمُ ٱلْخَبِيرُ ① يَعْلَمُ مَا يَلِجُ فِى ٱلْأَرْضِ وَمَا يَخْرُجُ مِنْهَا وَمَا يَنزِلُ مِنَ ٱلسَّمَآءِ وَمَا يَعْرُجُ فِيهَا ۚ وَهُوَ ٱلرَّحِيمُ ٱلْغَفُورُ ② ﴾ سبأ (١ - ٢)

...Who is aware of the unseen, and from Whom is not hidden the least mass of an atom neither in the heavens nor in the earth, nor is there anything less than that or greater, but in a conspicuous record. That He shall reward those who believe and have deeds of righteousness : For such is forgiveness and generous sustenance.

- Sabaa (3 - 4) -

﴿ عَٰلِمِ ٱلْغَيْبِ ۖ لَا يَعْزُبُ عَنْهُ مِثْقَالُ ذَرَّةٍ فِى ٱلسَّمَٰوَٰتِ وَلَا فِى ٱلْأَرْضِ وَلَآ أَصْغَرُ مِن ذَٰلِكَ وَلَآ أَكْبَرُ إِلَّا فِى كِتَٰبٍ مُّبِينٍ ③ لِّيَجْزِىَ ٱلَّذِينَ ءَامَنُوا۟ وَعَمِلُوا۟

ٱلصَّٰلِحَٰتِ أُوْلَٰٓئِكَ لَهُم مَّغْفِرَةٌ وَرِزْقٌ كَرِيمٌ ﴿٤﴾ سبأ (٣ - ٤)

It is worth mentioning here that during the time of the revelation (of the Holy Qurân) it was common (according to Greek philosophers) to call the ultimate small size of material bodies by the name "atom". It was also believed that the atom could not be divided into smaller constituents. Its divisibility was realized only in the Age of Science, but the Holy Qurân still says what means :

.... and from your Master is not hidden the least mass of an atom, neither in the earth nor in heavens, nor is there anything less than that or greater, but in a conspicuous record.

- Yunus (61) -

﴿ وَمَا يَعْزُبُ عَن رَّبِّكَ مِن مِّثْقَالِ ذَرَّةٍ فِي ٱلْأَرْضِ وَلَا فِي ٱلسَّمَآءِ وَلَآ أَصْغَرَ مِن ذَٰلِكَ وَلَآ أَكْبَرَ إِلَّا فِي كِتَٰبٍ مُّبِينٍ ﴿٦١﴾ يونس (٦١)

The main basic themes of the so-called useful scientific knowlege are miraculously inherent in the text of the Holy Qurân for the purpose of human enlightenment. Essentials of natural phenomena such as : clouds, rain wind, daylight... have been generally indicated in the Holy Qurân before being established by scientists. Enlightened minds, however, will think rationally and honestly and consequently never miss the reality of Creation.

Examples of the universality and unification in the base of the origin of creation are, in the Age of Science,evident in the conclusions attained in all the branches of science such as : the laws of physics, the "phenomenon of pairs" observable in both animate and inanimate creation, the structure of the atom and of the solar system, the precise quantitation and precision involved

in the creation and the secrets of the soul... Moreover, the unlimited vastness and the sequential hierarchic constitution of the entire universe are vivid indications of the Creator and the oneness of Allah.

The Holy Qurân does not provide text books or lecture notes in dealing with scientific subjects, but quotes the (facts) that reflect on the glory of organization, grandeur of creation, precision, supreme cohesion of purpose, proof of Divine power, unique intelligence, and elimination of the so-called " accidental creation . The Holy Qurân states what means :

And We made the sky (the atmosphere) preserved roof yet they care not to recognize its (multiple) services.

- Al - Anbiyaa (32) -

﴿ وَجَعَلْنَا ٱلسَّمَآءَ سَقْفًا مَّحْفُوظًا وَهُمْ عَنْ ءَايَـٰتِهَا مُعْرِضُونَ ﴿٣٢﴾ ﴾

الانبياء (٣٢)

The earth's roof is its atmosphere. It is composed of a mixture of gases which are preserved and not allowed to escape into space due to the relatively large gravity of the earth. This condition could not be realized on the moon, which lost its roof and thus became roofless, due to its relatively small gravitational force. In this way the moon soon lost the water of its oceans and seas. It evaporated into the vast space.

The earth's atmosphere (or roof) renders vital services to living creatures on earth, notably human beings, such as :

1 - It contains oxygen necessary for the life of both the animal and the plant kingdoms.

2 - It carries water vapour from the earth's surface up to the upper layers of the atmosphere where clouds form and give rain. This process involves the source of fresh water on earth.

3 - It contains the carbon dioxide gas, which is absorbed by plants receiving sunlight by day to form sugar, starch, oil...

4 - Sound waves propagate through the air, thus we can hear the voice of each other. This is not the case on the moon.

5 - Daylight is due to the scattering and diffuse reflection of sun rays in the thin air layer extending from the earth's surface up to about 200 Kilometers and facing the sun. This layer may be referred to as the (skin - layer). The rest of the atmosphere and space are dark and dim. As the earth rotates the skin - layer keeps facing the sun and appears as though it is flayed from the body of the atmospere. Miraculously enough the Holy Qurân says in this respect what means :

And a sign to them is the night when We slay from it the day they become in darkness.

- Yasin (37) -

﴿ وَءَايَةٌ لَّهُمُ ٱلَّيْلُ نَسْلَخُ مِنْهُ ٱلنَّهَارَ فَإِذَا هُم مُّظْلِمُونَ ﴾

يس (٣٧)

Again, one reads in the Holy Qurân what means :

1 - And that is He Who made the sun shining and the moon illuminating and measured out phases for it that you might be aware of the number of years and the count of time; nowise did Allah create this but in Truth and Righteousness, thus He explains His signs in detail for a people who are granted knowledge.

- Yunus (5) -

﴿ هُوَ ٱلَّذِى جَعَلَ ٱلشَّمْسَ ضِيَآءً وَٱلْقَمَرَ نُورًا وَقَدَّرَهُۥ مَنَازِلَ لِتَعْلَمُوا۟ عَدَدَ ٱلسِّنِينَ

وَٱلۡحِسَابَ مَا خَلَقَ ٱللَّهُ ذَٰلِكَ إِلَّا بِٱلۡحَقِّ يُفَصِّلُ ٱلۡأٓيَٰتِ لِقَوۡمٖ يَعۡلَمُونَ ﴿٥﴾ ﴾

يونس (٥)

Evidently, this verse refers to the fact that the sun is the source of light, while the moon reflects back sunlight falling on its surface back to the Earth. Lunar months and years can be readily counted by observing the phases of the moon. The Holy Qurân states what means :

2 - And We have made the night and the day two signs : the sign of the night have We cancelled while We have made the sign of the day lightened that you may seek bounty from your Master and that you may know the number and count of the years; likewise everything have We fully explained.

- Al - Israa (12) -

﴿ وَجَعَلۡنَا ٱلَّيۡلَ وَٱلنَّهَارَ ءَايَتَيۡنِۖ فَمَحَوۡنَآ ءَايَةَ ٱلَّيۡلِ وَجَعَلۡنَآ ءَايَةَ ٱلنَّهَارِ مُبۡصِرَةٗ لِّتَبۡتَغُواْ فَضۡلٗا مِّن رَّبِّكُمۡ وَلِتَعۡلَمُواْ عَدَدَ ٱلسِّنِينَ وَٱلۡحِسَابَۚ وَكُلَّ شَيۡءٖ فَصَّلۡنَٰهُ تَفۡصِيلٗا ﴿١٢﴾ ﴾

الإسراء (١٢)

The earth receives maximum amount of solar energy in the blue part of the solar spectrum. Also the blue rays suffer maximum scattering by the air molecules present in the lowest 200 kms of the atmosphere, thus producing the blue of the sky. This means that the blue of the sky is nothing but an optical phenomenon.

Scattering of the rays makes them come from all directions, so that it is not necessary, in order to lighten a room with day - light, that one should open a window facing the sun. Opening any window not facing the sun allows scattered rays to enter the room

and lighten it ! Is that not a sign of the Creator being All - Wise and All - Cognizant ?

The Holy Qurân states what means :

3 - Allah is He Who raised the heavens without pillars that you may see; then mastered Himself on the throne of Authority and subjected the sun and the moon, each one runs its course for a term appointed....

- Al - Raad (2) -

﴿ اللَّهُ الَّذِي رَفَعَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا ثُمَّ اسْتَوَىٰ عَلَى الْعَرْشِ وَسَخَّرَ الشَّمْسَ وَالْقَمَرَ كُلٌّ يَجْرِي لِأَجَلٍ مُسَمًّى ﴾ الرعد (٢)

In fact, here and there in its text, the Holy Qurân draws our attention to the various signs (of the Creator) embedded in the universe such as : The vast dimensions of space; the rèlativity of time and the alteration of day and night on earth. The Holy Qurân states what means :

Indeed I could swear by the sites of the stars and indeed it is a great oath if your are aware of it.

- Al - Waqiaa (75) -

﴿ فَلَا أُقْسِمُ بِمَوَاقِعِ النُّجُومِ ﴿٧٥﴾ وَإِنَّهُ لَقَسَمٌ لَوْ تَعْلَمُونَ عَظِيمٌ ﴿٧٦﴾ ﴾

الواقعة (٧٥)

As stated in Book (2), the so - called quasars have been discovered at sites greater than 10 billion light years afar ! The Holy Qurân states what means :

And indeed in accord with your Master, one day is like thousand years as counted by you.

- Al - Haj (47) -

﴿ وَإِنَّ يَوْمًا عِندَ رَبِّكَ كَأَلْفِ سَنَةٍ مِّمَّا تَعُدُّونَ ﴿٤٧﴾ ﴾ الحج (٤٧)

Scientifically speaking, there is no absolute time. One day on earth differs from that on any other planet in our solar system.

And in the alteration of night and day and the sustenance which Allah sends down from the sky, whereby He gives life to the earth after its death, and in sending winds in their ways are signs for a people of discernment.

- Al - Jathiya (5) -

﴿ وَٱخْتِلَٰفِ ٱلَّيْلِ وَٱلنَّهَارِ وَمَآ أَنزَلَ ٱللَّهُ مِنَ ٱلسَّمَآءِ مِن رِّزْقٍ فَأَحْيَا بِهِ ٱلْأَرْضَ بَعْدَ مَوْتِهَا وَتَصْرِيفِ ٱلرِّيَٰحِ ءَايَٰتٌ لِّقَوْمٍ يَعْقِلُونَ ﴿٥﴾ ﴾ الجاثيه (٥)

Mathematics is accounted for in the Holy Qurân by using the Decimal system of notation. It is the science of number. The present system of notation is known as the Arabic system. In this system, the number which is written 888, was, in the Roman system, written in the form :

DCCCL XXX VIII.

Evidently, in the Arabic decimal system, one letter stands for eight hundred, another for eighty and another for eight. Thus the symbol 8 can signify eight hundred, or eighty or eight according to position. The symbol O, as was introduced by the Arabs, was placed in the position where no number was present.

During the time of the Revelation (of the Holy Qurân), there was in use more than one system of notation and counting, but the Holy Qurân insisted to use in its text the so- called Decimal system only. This system, as described above includes the method of counting by tens. This choice of the Holy Qurân

urged the Muslims to stick to it and to recommend it to all other nations.

The frequency of occurance of numbers in the text is not equal. The number 1 has the highest frequency, about 95. this is natural, because Islam is the religion of Uniterians. The Holy Qurân says, for example what means :

Say He is Allah the One and only.

- Al - Ikhlas (1) -

﴿ قُلْ هُوَ ٱللَّهُ أَحَدٌ ۝١ ﴾ الاخلاص (١)

The greater part of the numbers used are evidently 10 and powers of 10, such as :

100 - 1,000 - ...... 100,000.

The decimal point $^1/_{10}$ was introduced later by the Muslims. The Holy Qurân says what means :

And those who were their predecessors rejected the Truth even though they did not receive one tenth of what We had granted.... .

- Sabaa (45) -

﴿ وَكَذَّبَ ٱلَّذِينَ مِن قَبْلِهِمْ وَمَا بَلَغُوا۟ مِعْشَارَ مَآ ءَاتَيْنَٰهُمْ ﴾ سبأ (٤٥)

The world had to wait about 200 years after the time of the Revelation of the Holy Qurân until the Muslim mathematician, Gamshid, introduced the decimal point and the symbol O in the positions where no number was present.

The following are examples regarding the verses mentioning the number 10 and its powers :

1 - He who brings a good deed shall have ten the like of it....

- Al - Aneam (160) -

﴿ مَن جَآءَ بِٱلْحَسَنَةِ فَلَهُۥ عَشْرُ أَمْثَالِهَا ﴾ الأنعام (١٦٠)

2 - ..... and if there are of you one hundred they will vanquish a thousand of the unbelievers...

- Al - Anfal (65) -

﴿ وَإِن يَكُن مِّنكُم مِّاْئَةٌ يَغْلِبُوٓاْ أَلْفًا مِّنَ ٱلَّذِينَ كَفَرُواْ ﴾ الانفال (٦٥)

3 - ....and a day in the sight of the Master is like a thousand years of your reckoning.

- Al - Haj (47) -

﴿ وَإِنَّ يَوْمًا عِندَ رَبِّكَ كَأَلْفِ سَنَةٍ مِّمَّا تَعُدُّونَ ﴿٤٧﴾ ﴾ الحج (٤٧)

4 - .... In a day the measure whereof is as fifty thousand years.

- Al-Maareg (4) -

﴿ فِى يَوْمٍ كَانَ مِقْدَارُهُۥ خَمْسِينَ أَلْفَ سَنَةٍ ﴿٤﴾ ﴾ المعارج (٤)

5 - And We sent him to a hundred thousand (persons) or more.

- Al - Saffat (147) -

﴿ وَأَرْسَلْنَٰهُ إِلَىٰ مِاْئَةِ أَلْفٍ أَوْ يَزِيدُونَ ﴿١٤٧﴾ ﴾ الصافات (١٤٧)

6 - Didst thou not turn your vision to those who abandoned their houses though they were thousands....

- Al - Baqara (243) -

﴿ أَلَمْ تَرَ إِلَى ٱلَّذِينَ خَرَجُواْ مِن دِيَٰرِهِمْ وَهُمْ أُلُوفٌ ﴾ البقرة (٢٤٣)

Obviously, one can say that the text comes in a manner declaring the approach of the "Age of Science", being comprehensive, stimulant to the thought, rational and enlightening to the mind.

Knowledge becomes rather complete and well understood when it is quantized. Mathematics in this respect is the element of wisdom and exact meaning. Its study introduces balance and order to the various branches of knowledge.

Muslim mathematicians added various fundamental contributions to mathematical sciences, such as the introduction of algebra and Logarithms.

In the field of natural sciences the Holy Qurân says, for example what means :

1 - Have We not made the earth as an expanse; and the mountains as pegs.

- Al - Nabaa (6-7) -

﴿ أَلَمْ نَجْعَلِ الْأَرْضَ مِهَادًا ﴿٦﴾ وَالْجِبَالَ أَوْتَادًا ﴿٧﴾ ﴾ النبأ (٦ - ٧)

A modern model of the earth's crust shows a rather uniform thick layer of basalt over the so - called mantle. Upon these are superimposed continental blocks with average thickness varying between about 30 - 40 Kilometers. These blocks are so heavy that they press the layer of basalt underneath them down by about 20 kilometers into the mantles thus resembling roots or pegs.

Nowadays, the fact that a continent floats on the mantle is known as the (Theory of Isostacy), and just as the roots of continental blocks thrust deep into the underlying mantle, so the roots of mountain systems push down, even deeper in order to support their weights, and to justify their great heights. In this respect the Holy Qurân says, what means :

1 - Have We not made the earth as a wide expanse; and the mountains as pegs.

- Al - Nabaa (6-7)-

﴿ أَلَمْ نَجْعَلِ ٱلْأَرْضَ مِهَـٰدًا ۝٦ وَٱلْجِبَالَ أَوْتَادًا ۝٧ ﴾ النبأ (٦ - ٧)

Usually, from high mountains and stable - lands, rivers flow down to valleys and flat areas of the earth's surface. The Holy Qurân says what means :

2 - And it is He Who spread out the earth and set thereon high mountains and (flowing) rivers....

- Al - Raad (3) -

﴿ وَهُوَ ٱلَّذِى مَدَّ ٱلْأَرْضَ وَجَعَلَ فِيهَا رَوَٰسِىَ وَأَنْهَـٰرًا ﴾ الرعد (٣)

Again, the most striking feature about the earth's surface is that most of it (about $^4/_5$) is covered with water. Still more land could be drowned in oceans if the earth's heat reservoirs, represented by the millions of cubic Kilometers of the ice caps in polar and high mountain regions, were to melt. Average sea-level will thus rise by about 500 meters.

All this amount of water on earth is not in vain. It supports life on it and acts to minimise temperature differences and contrasts on the planet between day and night, and summer and winter in an outstanding manner. However, the Holy Qurân says what means :

3 - And We sent down water from the sky according to (due) measure and thus We caused it to be presered in the earth....

- Al - Mominoon (18) -

﴿ وَأَنزَلْنَا مِنَ ٱلسَّمَآءِ مَآءًۢ بِقَدَرٍ فَأَسْكَنَّـٰهُ فِى ٱلْأَرْضِ ﴾ المؤمنون (١٨)

Evidently, within the material universe, including our home (the earth), these are signs for people to witness Allah's supreme wisdom and unlimited knowledge :

4 - And in the earth are signs for believers.

- Al - Dhariyat (20) -

﴿ وَفِي الْأَرْضِ آيَاتٌ لِّلْمُوقِنِينَ ﴾ الذاريات (٢٠)

Water that covers about four fifths of the globe is vital for life to flourish on it. The creation of the atmosphere, which acts as roof of the entire earth, dominates and protects lives of living beings on it as mentioned before .

Without rain erosion and weathering of rocks become almost checked and there would be no fertile soil in which plants could grow. Needless to say - that water forms more than 70 per cent of the weight of our bodies and takes part in almost all the chemical reactions taking place in living bodies in general. Allah says what means :

5 - ... And We made from water every living thing....

- Al - Anbiyaa (30) -

﴿ وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ ﴾ الانبياء (٣٠)

6 - He sent down water from the sky thereby channels did flow, each according to its measure....

- Al - Raad (17) -

﴿ أَنزَلَ مِنَ السَّمَاءِ مَاءً فَسَالَتْ أَوْدِيَةٌ بِقَدَرِهَا ﴾ الرعد (١٧)

7 - Verily in the heavens and the earth are signs for the believers..

- Al - Jathiya (3) -

﴿ إِنَّ فِي ٱلسَّمَٰوَٰتِ وَٱلْأَرْضِ لَآيَٰتٍ لِّلْمُؤْمِنِينَ ﴿٣﴾ ﴾ الجاثيه (٣)

Without the carbondioxide plants could not produce carbohydrates which are the primary stage in the food chain that supports animal life on earth. In this process solar energy (light) is also stored by the green matter of the leaves (chlorophyl) in the form of wood or carbon, oil, sugar and starch for the benefit of mankind. In such respects the Holy Qurân says what means :

8 -And He has subjected to you, freely from Him, all that is in the heavens and that is in the earth...

- Al - Jathia (13) -

﴿ وَسَخَّرَ لَكُم مَّا فِي ٱلسَّمَٰوَٰتِ وَمَا فِي ٱلْأَرْضِ جَمِيعًا مِّنْهُ ﴾ الجاثيه (١٣)

9 - And He is who has sent down water from the sky thereby We produce plants of all types from which we get out green matter (chlorophyl) by which we produce cumulative grains..... .

- Al - Anaam (99) -

﴿ وَهُوَ ٱلَّذِيٓ أَنزَلَ مِنَ ٱلسَّمَآءِ مَآءً فَأَخْرَجْنَا بِهِۦ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا نُّخْرِجُ مِنْهُ حَبًّا مُّتَرَاكِبًا ﴾ الانعام (٩٩)

Without the high altitudes cover of atomic oxygen (ionsphere) and ozone (ozonsphere), which absorb most of the ultra-violet radiation coming from the sun, life on earth would be rather impossible. Again the Holy Qurân says what means :

10 - Have you not seen that Allah has subjected to you all that is in the earth... .

- Al - Haj (65) -

الحج (٦٥)

No Limits

In fact, the examples given above are mere samples not to be compared with the vast fields of knowledge which have been gained by the human race through scientific discoveries and researches.

Almost no limit could be made to scientific progress. According to the astronomical observations, no other beings live on the other planets of our own solar system. Man is, therefore, the master of the whole solar system. Allah says what means :

1 - 'And He taught (the race of) Adam the nature of all things....
.

- Al - Baqara (31) -

 البقرة (٣١)

2 - .... And say (asking Allah) : O my Master, I beg for increasing my knowledge.

- Taha (114) -

﴿ وَقُل رَّبِّ زِدْنِي عِلْمًا ﴾ طه (١١٤)

Scientists predict that life on earth will finally come to an end when the sun suddenly expands (or eplodes) in such a dreadful manner that it reaches the moon and consequently burns the earth. At present, the temperature of its outer radiating surface has been estimated to be 6000 degrees absolute! Allah says what means :

And the sun and moon are joined together. That day will man say : Where is the refuge?

- Al - Qiyama (9 - 10) -

﴿ وَجُمِعَ ٱلشَّمْسُ وَٱلْقَمَرُ ۝٩ يَقُولُ ٱلْإِنسَـٰنُ يَوْمَئِذٍ أَيْنَ ٱلْمَفَرُّ ۝١٠ ﴾

القيامه (٩ - ١٠)

The Holy Qurân tells us that this will take place when the earth becomes an ornamental spot in the solar system, and man becomes the master in the system :

Until the earth becomes clad with its garden ornaments and is decked out in beauty, and the people to whom it belongs think that they possess the ability of disposal over it, there comes Our command by night or by day.... .

- Yunus (24) -

﴿ حَتَّىٰٓ إِذَآ أَخَذَتِ ٱلْأَرْضُ زُخْرُفَهَا وَٱزَّيَّنَتْ وَظَنَّ أَهْلُهَآ أَنَّهُمْ قَـٰدِرُونَ عَلَيْهَآ أَتَىٰهَآ أَمْرُنَا لَيْلًا أَوْ نَهَارًا ﴾

يونس (٢٤)

Surely, Allah's command will come by night or by day, exactly as the verse states, because at any moment only one half of the earth's surface faces the sun and receives sun light, while the other half becomes at night.

2 - THE RÔLE OF THE HOLY QURÂN IN ESTABLISHING THE PRINCIPLES OF BASIC SCIENCE

ARITHMATIC

The advancement in arithmatic was the first real step that lead to the progress in science. During the time of the revelation there existed in common use two principal systems of number and counting, namely the decimal and the sexagesimal systems. As a simple example illustrating the difference between these systems, the value of 231.157 in the decimal system is :

$$2 \times 100 + 3 \times 10 + 1 + \frac{1}{10} + \frac{5}{100} + \frac{7}{1000}$$

which in the sexagesimal system is :

$$2 \times 3600 + 3 \times 60 + 1 + \frac{1}{60} + \frac{5}{3600} + \frac{7}{216000}$$

The Holy Qurân, as said above, urged the Muslims to reject adopting, and stop using, the sexagesimal system. On the basis of the decimal system of numbers and fractions, it uses the following digits and numbers in various aspects :

1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 14 - 19 - 20 - 30 - 40 - 60 - 70 - 80 - 99 - 100 - 200 - 300 - 1000 - 2,000 - 3,000 - 5,000 - 50,000 - and 100,000.

Amongst the fractions used one can find :

$$\frac{1}{2} - \frac{1}{3} - \frac{1}{4} - \frac{1}{5} - \frac{1}{6} - \frac{1}{8} - \frac{1}{10}$$

Naturally, the number 1 has maximum frequency of occurence amongst all the verses, since Islam is the religion of Uniterians. One of the verses reads as follows :

Say : He is Allah the One and Only.

- Al - Ikhlas (1) -

﴿ قُلْ هُوَ ٱللَّهُ أَحَدٌ ﴿١﴾ ﴾ الإخلاص (١)

Evidently, the Holy Qurân also repeats using the number 10 and its powers to 10 to the five. At that early time of the revelation, however, mathematical operations were limited to certain purposes in trade, heritage and the like... The dozen was also sometimes used .

The world had to wait at least 200 years after revelation until the Muslim scientists introduced the decimal point and the use of the Zero (0) as we know it now.

The following are some selected verses which mean :

1 - Allah directs you as regards your children's (inheritance) : for the male a portion equal to that of two females; but if only women more than two their share is two thirds of the inheritance, and if only one, her share is one half; for parents, a sixth share of the inheritance is for each if the deceased left children; if he has no children and the parents are the (only) heirs the mother takes the third, but if the deceased has brothers (or sisters) the mother takes sixth. The distribution in all cases is (always) after the payment of legacies or debts.

- Al - Nisaa (11) -

وَٰحِدٍ مِّنْهُمَا ٱلسُّدُسُ مِمَّا تَرَكَ إِن كَانَ لَهُۥ وَلَدٌ ۚ فَإِن لَّمْ يَكُن لَّهُۥ وَلَدٌ وَوَرِثَهُۥٓ
أَبَوَاهُ فَلِأُمِّهِ ٱلثُّلُثُ ۚ فَإِن كَانَ لَهُۥٓ إِخْوَةٌ فَلِأُمِّهِ ٱلسُّدُسُ ۚ مِنۢ بَعْدِ
وَصِيَّةٍ يُوصِى بِهَآ أَوْ دَيْنٍ ﴾
النساء (١١)

2 -And their predecessors rejected the Truth and yet they have not attained one tenth of what we had granted to those....

- Sabaa (45) -

﴿ وَكَذَّبَ ٱلَّذِينَ مِن قَبْلِهِمْ وَمَا بَلَغُوا۟ مِعْشَارَ مَآ ءَاتَيْنَٰهُمْ ﴾ سبا (٤٥)

3 - He who does good will have ten times as much to credit...

- Al - an'am (161) -

﴿ مَن جَآءَ بِٱلْحَسَنَةِ فَلَهُۥ عَشْرُ أَمْثَالِهَا ﴾ الانعام (١٦٠)

4 - Or they may say : he forged it; say to them : bring you then ten Suras forged like to it....

- Hud (13) -

﴿ أَمْ يَقُولُونَ ٱفْتَرَىٰهُ ۖ قُلْ فَأْتُوا۟ بِعَشْرِ سُوَرٍ مِّثْلِهِۦ مُفْتَرَيَٰتٍ ﴾ هود (١٢)

5 - And we appointed for Moses thirty nights, and added to them ten, and he completed the whole time appointed by his Master of forty nights.

- Al - Aeraf (142) -

﴿ وَوَٰعَدْنَا مُوسَىٰ ثَلَٰثِينَ لَيْلَةً وَأَتْمَمْنَٰهَا بِعَشْرٍ فَتَمَّ مِيقَٰتُ رَبِّهِۦٓ أَرْبَعِينَ لَيْلَةً ۚ ﴾
الاعراف (٧)

6 - Allah aforetime did take a covenant from the Children of Israel and We appointed among them twelve Captains.... .

- Al - Maida (12) -

﴿ وَلَقَدْ أَخَذَ اللَّهُ مِيثَاقَ بَنِي إِسْرَائِيلَ وَبَعَثْنَا مِنْهُمُ اثْنَيْ عَشَرَ نَقِيبًا ﴾

المائدة (١٢)

7 - The parable of those who spend their substance in the way of Allah is like that of a grain (of corn) which grows seven ears, each ear has one hundred grains; and Allah gives manifold increase to whom He pleases....

- Al - Baqara (261) -

﴿ مَثَلُ الَّذِينَ يُنْفِقُونَ أَمْوَالَهُمْ فِي سَبِيلِ اللَّهِ كَمَثَلِ حَبَّةٍ أَنْبَتَتْ سَبْعَ سَنَابِلَ فِي كُلِّ سُنْبُلَةٍ مِائَةُ حَبَّةٍ وَاللَّهُ يُضَاعِفُ لِمَنْ يَشَاءُ ﴾

البقرة (٢٦١)

8 - Remember you implored the assistance of your Master and He answered you : I shall assist you with one thousand of the angels, ranks on ranks.

- Al - Anfal (9) -

﴿ إِذْ تَسْتَغِيثُونَ رَبَّكُمْ فَاسْتَجَابَ لَكُمْ أَنِّي مُمِدُّكُمْ بِأَلْفٍ مِنَ الْمَلَائِكَةِ مُرْدِفِينَ ﴿٩﴾ ﴾

الانفال (٩)

9 - And We did send Nooh to his people and he tarried among them one thousand years less fifty years.... .

- Al - Ankabut (14) -

﴿ وَلَقَدْ أَرْسَلْنَا نُوحًا إِلَىٰ قَوْمِهِ فَلَبِثَ فِيهِمْ أَلْفَ سَنَةٍ إِلَّا خَمْسِينَ عَامًا ﴾

العنكبوت

10 - He (controls and rules) all affairs from the Heaven to the Earth, then will (all affairs) be raised up to Him (taaruj) during a day the measure whereof is one thousand years of your reckoning.

- Al - Sajda (5) -

﴿ يُدَبِّرُ ٱلْأَمْرَ مِنَ ٱلسَّمَآءِ إِلَى ٱلْأَرْضِ ثُمَّ يَعْرُجُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُۥٓ أَلْفَ سَنَةٍ مِّمَّا تَعُدُّونَ ﴾ السجدة (٥)

11 - The Night of Qadr (Power and Mercy) is better than thousand months.

﴿ لَيْلَةُ ٱلْقَدْرِ خَيْرٌ مِّنْ أَلْفِ شَهْرٍ ﴾ القدر (٣)

12 - ... If there are twenty amongst you, patient (and persevering), they will vanquish two hundred and if there are one hundred they will vanquish one thousand of the unbelievers... .

- Al - Anfal (65) -

﴿ إِن يَكُن مِّنكُمْ عِشْرُونَ صَٰبِرُونَ يَغْلِبُوا۟ مِا۟ئَتَيْنِ ۚ وَإِن يَكُن مِّنكُم مِّا۟ئَةٌ يَغْلِبُوٓا۟ أَلْفًا مِّنَ ٱلَّذِينَ كَفَرُوا۟ ﴾ الانفال (٦٥)

13 - ... and He knew that there is weakness in you; even though if there are a hundred of you, patient and persevering, they will vanquish two hundred with the leave of Allah, for Allah is with those who patiently persevere.

- Al - Anfal (66) -

﴿ وَعَلِمَ أَنَّ فِيكُمْ ضَعْفًا ۚ فَإِن يَكُن مِّنكُم مِّا۟ئَةٌ صَابِرَةٌ يَغْلِبُوا۟ مِا۟ئَتَيْنِ ۚ وَإِن

يَكُن مِّنكُمْ أَلْفٌ يَغْلِبُوٓا أَلْفَيْنِ بِإِذْنِ ٱللَّهِ وَٱللَّهُ مَعَ ٱلصَّٰبِرِينَ ﴿٦٦﴾ ﴾ الأنفال (٦٦)

14 - ... Is it not enough for you that your Master would provide you with three thousand angles (specially) sent down?.

- Al - Imran (124) -

﴿ أَلَن يَكْفِيَكُمْ أَن يُمِدَّكُمْ رَبُّكُم بِثَلَٰثَةِ ءَالَٰفٍ مِّنَ ٱلْمَلَٰٓئِكَةِ مُنزَلِينَ ﴿١٢٤﴾ ﴾

آل عمران (١٢٤)

15 - Yea, if you remain firm and act aright, even if (your enemy) should rush in hereon you in hot haste, your Master would provide you with five thousand angels making terrific onslaught.

- Al - Imran (125) -

﴿ بَلَىٰٓ إِن تَصْبِرُوا وَتَتَّقُوا وَيَأْتُوكُم مِّن فَوْرِهِمْ هَٰذَا يُمْدِدْكُمْ رَبُّكُم بِخَمْسَةِ
ءَالَٰفٍ مِّنَ ٱلْمَلَٰٓئِكَةِ مُسَوِّمِينَ ﴿١٢٥﴾ ﴾ آل عمران (١٢٥)

16 - Did you not turn by vision to those who abandoned their homes, though they were thousands (in number) for fear of death...?

- Al - Baqara (243) -

﴿ أَلَمْ تَرَ إِلَى ٱلَّذِينَ خَرَجُوا مِن دِيَٰرِهِمْ وَهُمْ أُلُوفٌ حَذَرَ ٱلْمَوْتِ ﴾

البقرة (٢٤٣)

17 - The angels and the Spirit taaruj (ascend curvilinearly) to Him in a day the measure whereof is (as) fifty thousand years.

- Al - Maarij (4) -

﴿ تَعْرُجُ ٱلْمَلَٰٓئِكَةُ وَٱلرُّوحُ إِلَيْهِ فِى يَوْمٍ كَانَ مِقْدَارُهُۥ خَمْسِينَ أَلْفَ سَنَةٍ ﴿٤﴾

المعارج (٤)

18 - And we sent him (Jonah) to one hundred thousand (men) or more.

- Al - Saffat (147) -

الصفت (١٤٧)

WINDS

Winds are air in motion. Generally, air moves under the effect of atmospheric pressure differences. When air rises up it is cooled down by the expansion resulting from the decrease of atmospheric pressure with increasing height as mentioned in page 10 of book II of this series. The rate of cooling amounts to 10°c per kilometer for dry air and 6.5°c per kilometer for saturated air.

Cooling of moist air decreases its ability to hold water-vapour, and when saturation is attained further cooling produces condensation, or the formation of water-drops or ice crystals according to temperature. This is how clouds are formed at levels depending on the amounts of water-vapour present in the ascending air.

This means that clouds are formed by the ascent of moist air in the atmosphere (by winds moving in the vertical). The first book which postulates this fact is the holy Qurân :

He is Allah who sends the winds and they raise clouds....

- Al - Rum (48) -

﴿ اللَّهُ الَّذِي يُرْسِلُ الرِّيَاحَ فَتُثِيرُ سَحَابًا ﴾ الروم (٤٨)

2 - And Allah is He who sends forth the winds and they raise clouds...

- Fatir (9) -

﴿ وَاللَّهُ الَّذِي أَرْسَلَ الرِّيَاحَ فَتُثِيرُ سَحَابًا ﴾ فاطر (٩)

Naturally, therefore, the general distribution of clouds and rainfall over the earth's surface should follow the so-called

General Wind Circulation. Muslims have been requested and urged to study this circulation by the holy Qurân :

3 - ... And in the turning about of the winds there are signs for a people who are wise.

- Al -Jathiya (5) -

﴿ وَتَصْرِيفِ الرِّيَاحِ آيَاتٌ لِقَوْمٍ يَعْقِلُونَ ﴾ (الجاثيه , ٥)

4 - ... And in the turning about of the winds and the clouds which are trailed like slaves between the sky and the earth indeed there are signs for a people who are wise.

- Al - Baqara (164) -

﴿ وَتَصْرِيفِ الرِّيَاحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لَآيَاتٍ لِقَوْمٍ يَعْقِلُونَ ﴾ (البقرة ١٦٤)

Meteorologically speaking, winds are also known to be either continental (dry) or maritime (humid) in origin. The inflow of a maritime air-mass is usually a sign of wet weather, while dry weather generally accompanies the inflow of continental air-masses. The Holy Qurân, however, distinguishes between such air-masses :

5 - And He is Who sends the winds as heralds of glad tidings going before His mercy....

- Al - Furqan (48) -

﴿ وَهُوَ الَّذِي أَرْسَلَ الرِّيَاحَ بُشْرًا بَيْنَ يَدَيْ رَحْمَتِهِ ﴾ (الفرقان ٤٨)

The same meaning is also given in the verses Al - Rum (16), al - Naml (163) and Al - Araf (57), which refer to maritime

air-masses of wet periods. Dry air-masses are, on the other hand, rainless :

6 - And in the Ad (people) behold, We sent against them the devastating dry wind.

- Al - Zariyat (41) -

﴿ وَفِي عَادٍ إِذْ أَرْسَلْنَا عَلَيْهِمُ الرِّيحَ الْعَقِيمَ ﴾ الذاريات (٤١)

Winds also have different speeds or forces. Meterologists use a special scale of wind force known as the Beaufort Scale, which is given in table (1). In general, the meaning of each individual name of wind as quoted by the Holy Qurân has been given in Table (1)..

FORCE	Average SPEED	DESCRIPTION	NAME IN THE QURAN (TRANSLATED)
0	0 M.P.H	Calm	Calm
1	2	Light air	
2	5	Light Breeze	
3	10	Gentle Breeze	Favourable
4	15	Moderate Breeze	wind
5	21	Fresh Breeze	
6	28	Storng Breeze	Storng wind
7	35	Moderate Gale	Furious noisy
8	42	Fresh Gale	Violent
9	50	Storng Gale	Violent with showers of stones.
10	59	Whole Gale	Violent breaking masts.
11	68	Storm	Storm
12	Above 75	Hurricane	Hurricane.

Table (1). The Beaufort Scale

Some chosen verses concerning winds which mean :

Force (0) : If it be His will He can make the wind calm..

- Al-Shura (33) -

الشورى (٣٣)

Forces (1 - 5) : He is Who enableth you to traverse through land and sea, so that you even board ships, they sail with them with a favourable wind and they rejoice thereat...

- Yunus (22) -

﴿ هُوَ الَّذِي يُسَيِّرُكُمْ فِي الْبَرِّ وَالْبَحْرِ حَتَّىٰ إِذَا كُنتُمْ فِي الْفُلْكِ وَجَرَيْنَ بِهِم بِرِيحٍ طَيِّبَةٍ وَفَرِحُوا بِهَا ﴾ يونس (٢٢)

Force (6) : ... On which strong wind blew on a tempestuous day..

- Ibrahim (18) -

﴿ اشْتَدَّتْ بِهِ الرِّيحُ فِي يَوْمٍ عَاصِفٍ ﴾ إبراهيم (١٨)

Force (7) : So We sent against them a furious noisy wind through days of disaster....

- Fussilat (16) -

﴿ فَأَرْسَلْنَا عَلَيْهِمْ رِيحًا صَرْصَرًا فِي أَيَّامٍ نَّحِسَاتٍ ﴾ فصلت (١٦)

Force (8) : But the Ad, they were destroyed by a furious noisy violent wind.

- Al - Haqqa (6)-

﴿ وَأَمَّا عَادٌ فَأُهْلِكُوا بِرِيحٍ صَرْصَرٍ عَاتِيَةٍ ﴿٦﴾ ﴾ الحاقه (٦)

Force (9) : . Or that He will send against you a violent wind with showers of stones...

- Al - Israa (68) -

﴿ أَوْ يُرْسِلَ عَلَيْكُمْ حَاصِبًا ﴾ الإسراء (٦٨)

Force (10) · ... And sends against you a violent wind that breaks your masts...

- Al - Israa (69) -

﴿ فَيُرْسِلَ عَلَيْكُمْ قَاصِفًا مِّنَ الرِّيحِ ﴾ الإسراء (٦٩)

Force (11) : ... Comes a stormy wind and the waves come to them from all sides...

- Yunus (22) -

﴿ جَآءَتْهَا رِيحٌ عَاصِفٌ وَجَآءَهُمُ الْمَوْجُ مِن كُلِّ مَكَانٍ ﴾ يونس (٢٢)

Force (12) : .... And it was caught in a hurricane with fire therein...

- Al - Baqara (266) -

﴿ فَأَصَابَهَآ إِعْصَارٌ فِيهِ نَارٌ ﴾ البقرة (٢٦٦)

COSMOLOGY

It is accepted amongst cosmologists that the creation of the earth and the heavens (the universe) and their content of matter and radiation is neither haphazard nor accidental as non-believers utter, but according to perfect design and precise measure. In this respect the Holy Qurân says for example what means :

1 - Verily, there is not a single thing but its (unexhaustible sources and) treasures are with Us; and We only send down thereof in due and ascertainable measures.

- Al - Hijr (21) -

﴿ وَإِن مِّن شَيْءٍ إِلَّا عِندَنَا خَزَائِنُهُ وَمَا نُنَزِّلُهُ إِلَّا بِقَدَرٍ مَّعْلُومٍ ﴾

الحجر (٢١)

2 - ...And every single thing is to Him according to (precise) measure in due proportion.

- Al- Raad (8) -

﴿ وَكُلُّ شَيْءٍ عِندَهُ بِمِقْدَارٍ ﴾ الرعد (٨)

3 - Verily, everything have We created in due proportion and measure.

- Al - Qamar (49) -

﴿ إِنَّا كُلَّ شَيْءٍ خَلَقْنَاهُ بِقَدَرٍ ﴾ القمر (٤٩)

4 - And We sent down water from the sky according to a precise measure and thereby We caused the earth to hold it..

- Al - Mominoon (18) -

﴿ وَأَنزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي الْأَرْضِ ﴾ المؤمنون (١٨)

Astronomically, the earth is known to be the only planet in the solar system which contains a great amount of water in its three phases namely :

1 - The solid phase comprising the ice of the two poles and tops of mountains. These are vast areas where extensive amounts of surplus heat energy can be extinguished.

2 - The gaseous phase, which is the water - vapour suspended in the atmosphere. The density of water vapour is only $^{3}/_{8}$ that of the dry air. For this reason air can carry water- vapour and lift it to great heights sufficient for clouds to form and precipitation to occur by condensation, or transformation of the water vapour into water drops or ice crystals according to temperature.

3 - Liquid water, which is the liquid phase. This covers about three -quarters of the earth's surface. It is the source of water-vapour in the atomsphere. The so-called ocean - currents evenly distribute solar energy falling on the earth's surface, and thus enable life to flourish on earth.

Rain is the actual source of fresh-water on earth, whether we take this water from rivers, tributaries, wells, or springs... this is exactly what the Holy Qurân postulates The verse means :

4 - See you the water which you drink. Do you bring it down (in rain) from the nimbus clouds or are We Who let it fall ?.

- Al - Waqiaa (68-69) -

﴿ أَفَرَءَيْتُمُ ٱلْمَآءَ ٱلَّذِى تَشْرَبُونَ ﴿٦٨﴾ ءَأَنتُمْ أَنزَلْتُمُوهُ مِنَ ٱلْمُزْنِ أَمْ نَحْنُ ٱلْمُنزِلُونَ ﴿٦٩﴾ ﴾

الواقعه (٦٨ - ٦٩)

Again, for travelling through space, or ascent upwards to heavens, the Holy Qurân miraculously introduces the expression (Yaaruj) as verb, and (miiraj) as name. The expression means motion in curved lines and not in straight lines. We are now aware of the fact of the geometry of space that it does not know the so-called straight lines. In space all things move in curved lines. However, the Holy Qurân says what means :

1 - From Allah Master of (almaarij) the ways of ascent.)

- Al - Maarij (3) -

المعارج (٣)

2 - He Knows all that goes into the earth and all that comes out thereof, all that comes down from the heaven and all that yaaruj (mounts) thereto, and He is Al-Rahim (Most merciful) Al-Ghafoor (Oft - Forgiving).

- Sabaa (2) -

﴿ يَعْلَمُ مَا يَلِجُ فِى ٱلْأَرْضِ وَمَا يَخْرُجُ مِنْهَا وَمَا يَنزِلُ مِنَ ٱلسَّمَآءِ وَمَا يَعْرُجُ فِيهَا ۚ وَهُوَ ٱلرَّحِيمُ ٱلْغَفُورُ ﴿٢﴾ ﴾

سبا (٢)

3 - .. He knows whatever enters within the earth and whatever comes forth out of it, whatever comes down from the heaven and whatever yaaruj (mounts up) to it, and He is with you wheresoever you may be...

- Al - Hadeed (4) -

﴿ يَعْلَمُ مَا يَلِجُ فِي ٱلْأَرْضِ وَمَا يَخْرُجُ مِنْهَا وَمَا يَنزِلُ مِنَ ٱلسَّمَآءِ وَمَا يَعْرُجُ فِيهَا وَهُوَ مَعَكُمْ أَيْنَ مَا كُنتُمْ ﴾ الحديد (٤)

4 - The angels and the Spirit taaruj (ascend) to Him in a day the measure whereof is fifty thousand years.

- Al - maarij (4) -

﴿ تَعْرُجُ ٱلْمَلَٰٓئِكَةُ وَٱلرُّوحُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُۥ خَمْسِينَ أَلْفَ سَنَةٍ ۝٤ ﴾

المعارج (٤)

BIOCHEMISTRY

Under this title we are mainly concerned with photosynthesis, which is the process by which oxygen and complex organic substances, like oil or starch or sugar... are produced in plants from the carbondioxide present in the atmosphere and the water of the soil under the influence of sunlight in the presence of the chlorophyl which exists in the green leaves.

The chlorophyl is green colouring matter in almost all plants apart from few types. It is a mixture of two pigments in about three to one proportions. Both are exters and anaptonically related to hemin.

The chlorophyl is soluble in ether, alcohol, and olive oil, and when dissolved it exhibits a red florescence.

Relatively high energy content results from the fixation, as chemical energy, of part of the radiant energy of the sunlight falling on the plant's leaves.

In fact, photosynthesis is the most fundamentally important of biochemical processes. This is because, chemically speaking, green plants are the only productive segment of the earth's population. The Animal Kingdom is not so equipped to make use of solar radiant energy. Members of this kingdom make use only of the chemical energy stored in materials such as starches, sugars... , either directly or indirectly through other animals that feed on plants. In fact, the continuance of animal life is entirely dependent on the photosynthetic activity of plants. Miraculously enough, the Holy Qurân says what means :

And it is He who sends down water (rain) from the sky, with it We produce vegetation of all kinds (plants), from which We produce green (material chlorophyl) out of which We produce heeped grain... .

- Al - Anaam (99) -

﴿ وَهُوَ الَّذِي أَنزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا نُّخْرِجُ مِنْهُ حَبًّا مُّتَرَاكِبًا ﴾ الأنعام (٩٩)

OUTSTANDING OBSTACLES FACED THE ANCIENT AGRICULTURAL COMMUNITIES

The Holy Qurân mentions that the ancient agricultural community in Egypt used to face deadly troubles, whenever the people missed Allah's righteous way, as signs from Allah.

So We sent on them (high destructive) floods, locusts, lice, frogs and blood (bilharzia), signs openly self- explained...

- Al - Aaraf (133) -

﴿ فَأَرْسَلْنَا عَلَيْهِمُ الطُّوفَانَ وَالْجَرَادَ وَالْقُمَّلَ وَالضَّفَادِعَ وَالدَّمَ آيَاتٍ مُّفَصَّلَاتٍ ﴾

الأعراف (١٣٣)

The floods refer most likely to high Nile floods which used to destroy many villages and damage most fields in ancient Egypt. In our age of science, however, the Nile reservoirs and High Dam put an end to this effect.

Locusts destroy the crops. As the immature locusts can not fly, they march steadily across the country eating every green plant as they pass; and they even cross rivers by the bridges formed of the bodies of the drowned. vanguards !

Locusts multiply at an alarming rate. Vast swarms measuring 50 by 80 kms - and occupying several days in passing may fill the air such that the sunlight becomes almost totally absorbed. It is said that once train traffic was stopped by locusts' crushed bodies! However, nowadays locusts have been successfully vanquished and killed.

It can be readily seen that, before the age of science, the five

signs quoted in the Holy Qurân characterized the agricultural community of Ancient Egypt.

Lice form a group of small parasitic wingless insects. The mouth parts are developed into a hooked tube with which they bore into the skin and suck the blood of their hosts! The eggs are deposited on the hairs, hatch out in few days and produce their species in almost a fortnight.

Lice, in general, furnish an unbearable source of discomfort and diseases. Other types are : (a) The plant louse and (b) the chicken lice.

Frogs are smooth - skinned members of the order Ecaudate (tailless) of the class Batrachia. They are distinguished from newts and salamanders by the absence of a tail in the adult stage.

Frogs can live only in damp places. They are absent from deserts and high ranges of mountains. They furnish sources of unbearable noise. They feed on insects and slugs seized by thrusting out the long sticky tongues. Blood (Bilharzia) : The word blood has been mentioned by the Holy Qurân to denote urine containing blood as a result of infection with bilharzia. This disease has only been discovered by Dr. Bilharz in the last century.

THE SPHERICAL SHAPE AND ROTATION OF THE EARTH.

The fact that the earth is round and that it rotates round its axis and round the sun is also postulated in the Holy Qurân, but in an indirect manner.

People generally see that the earth's surface appears flat, inspite the fact that it is almost spherical. When referring to such apparently described phenomena, the Holy Qurân adopts a unique indirect way of expressing things such that it does not urge people to deny the revelation.

The spherical shape of the earth necessitates that when one half of the earth's surface faces the sun it becomes illuminated. This represents day time. The other half does not face the sun and faces the darkness of space (night). The Holy Qurân expresses this fact by saying what means :

1 - ... There reaches it Our command by night or by day...

- Yunus (24) -

﴿ أَتَاهَآ أَمْرُنَا لَيْلًا أَوْ نَهَارًا ﴾ يونس (٢٤)

Again, the Holy Qurân says what means :

2 - .... He makes the night spherically overlap the day, and makes the Day spherically overlap the night...

- Al - Zumar (5) -

3 - And the earth after that He made as an egg in shape.

- Al - Naziaat (30) -

﴿ وَالْأَرْضَ بَعْدَ ذَٰلِكَ دَحَاهَا ﴾ النازعات (٣٠)

In this verse, the Holy Qurân uses parts of the word (dahaha), which in some parts of the Arab world means (shaped like an egg). This has been discovered to be the true shape of the earth.

The rotation of the earth has been made clear by several verses such as :

4 - You cause the night to gain on the day and You cause the day to gain on the night...

- Al - Imran (27) -

﴿ تُولِجُ اللَّيْلَ فِي النَّهَارِ وَتُولِجُ النَّهَارَ فِي اللَّيْلِ ﴾ آل عمران (٢٧)

5 - .... And nor can the night outstrip the day and each revolves on in an orbit.

- Yasin (40) -

﴿ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ ﴾ يس (٤٠)

6 - And you see the mountains and think them firmly fixed (stationary), but they pass away as clouds pass away...

- Al - Naml (88) -

﴿ وَتَرَى الْجِبَالَ تَحْسَبُهَا جَامِدَةً وَهِيَ تَمُرُّ مَرَّ السَّحَابِ ﴾ النمل (٨٨)

THE LAST DAY

This is also the Day of Resurrection. Astronomically speaking, the earth and the solar system are not eternal. The whole matter will come to an end when the sun suddenly expands or explodes such that its outer atmosphere (6,000 degrees absolute) fills the whole space extending up to the orbit of the earth and its moon. Such a phenomenon is observed taking place in heavens.

The condition that our solar system retains its common features is that the sun remains in equilibrium and does not explode. Miraculously enough, this condition has been stated by the Holy Qurân which means :

It is not permitted to the sun to reach the moon, nor can the night outstrip the day, each should swim along in an orbit.

- Yasin (40) -

﴿ لَا الشَّمْسُ يَنبَغِي لَهَا أَن تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ ۚ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ ﴿٤٠﴾ ﴾ يس (٤٠)

The Holy Qurân adds what means :

1 - He questions : When is the Day of Resurrection?

- Al - Qiyama (6) -

﴿ يَسْأَلُ أَيَّانَ يَوْمُ الْقِيَامَةِ ﴿٦﴾ ﴾ القيامه (٦)

2 - But when the sight is dazed.

- Al - Qiyama (7) -

﴿ فَإِذَا بَرِقَ الْبَصَرُ ﴿٧﴾ ﴾ القيامه (٧)

3 - And the moon is eclipsed.

- Al - Qiyama (9) -

﴿ وَخَسَفَ ٱلْقَمَرُ ۝٨ ﴾ القيامه (٨)

4 - And the sun and the moon are joined together.

- Al -Qiyama (9) -

﴿ وَجُمِعَ ٱلشَّمْسُ وَٱلْقَمَرُ ۝٩ ﴾ القيامه (٩)

5 - Human beings on that Day utter : (where could escape be?)

- Al - Qiyama (10) -

﴿ يَقُولُ ٱلْإِنسَٰنُ يَوْمَئِذٍ أَيْنَ ٱلْمَفَرُّ ۝١٠ ﴾ القيامه (١٠)

PREVENTIVE MEDICINE

The Holy Qurân also comprises many verses which establish the principles underlying the best ways for keeping fit and healthy, or the principles for the basis of the so-called Preventive Medicine. These principles introduce the outstanding restrictions regarding food. The Holy Qurân says, for example what means :

1 - ... Eat and drink but waste not by excess for He (Allah) loves not the wasters.

- Al - Aaraf (31) -

﴿ وَكُلُوا وَاشْرَبُوا وَلَا تُسْرِفُوا إِنَّهُ لَا يُحِبُّ الْمُسْرِفِينَ ﴿٣١﴾ ﴾

الاعراف (٣١)

2 - Forbidden to you (for food) are :

dead meat, blood, the flesh of the swine and that on which has been involved the name of other than Allah, that which has been killed by strangulation, or by a violent blow, or by a headlong fall, or by being gored to death : that which has been (partly) eaten by a wild animal, unless you are able to slaughter it (in due form), that which is sacrificed on stone (altars)... .

- Al - Maida (3) -

﴿ حُرِّمَتْ عَلَيْكُمُ الْمَيْتَةُ وَالدَّمُ وَلَحْمُ الْخِنزِيرِ وَمَا أُهِلَّ
لِغَيْرِ اللَّهِ بِهِ وَالْمُنْخَنِقَةُ وَالْمَوْقُوذَةُ وَالْمُتَرَدِّيَةُ وَالنَّطِيحَةُ
وَمَا أَكَلَ السَّبُعُ إِلَّا مَا ذَكَّيْتُمْ وَمَا ذُبِحَ عَلَى النُّصُبِ ﴾ المائدة (٣)

As a rule, all dead meat is forbidden except marine species and locusts. Similarly, all blood is forbidden apart from liver and spleen.

Muslims have to drain off the blood from the vessels of an animal by slaughtering and to mention the name of Allah before the slaughter.

Medically, pork meat is synthetized in the body. Many parasites exist in its meat. It is therefore, harmful. The prohibition of the other types of meat quoted in the above verse follow similar agruments having their roots in biochemistry.

3 - O ye who believe : Intoxicants and gambling, stones and arrows are abominations of the Satan's handiwork; (so) avoid such, that you may prosper.

- Al - Maida (90) -

﴿ يَٰٓأَيُّهَا ٱلَّذِينَ ءَامَنُوٓاْ إِنَّمَا ٱلۡخَمۡرُ وَٱلۡمَيۡسِرُ وَٱلۡأَنصَابُ وَٱلۡأَزۡلَٰمُ رِجۡسٞ مِّنۡ عَمَلِ ٱلشَّيۡطَٰنِ فَٱجۡتَنِبُوهُ لَعَلَّكُمۡ تُفۡلِحُونَ ٩٠ ﴾ المائدة (٩٠)

Alcohol is now known to have bad and serious effects on the liver, brain, heart and vascular system. Moreover, alcohol leads to loss of dignity, self respect and poor personality.

Marriage and sexual affairs have their issue related to health. One reads in the Holy Qurân what means :

4 - And they ask you concerning women's courses. Say : They are a hurt and a pollution; so keep away from women in their courses and do not approach them until they are clean. But when they have purified themselves, you may approach them in any manner (time or place) ordained for you by Allah; for Allah

loves those who turn to Him always and He loves those who keep themselves pure and clean.

- Al - Bqara (222) -

﴿ وَيَسْـَٔلُونَكَ عَنِ ٱلْمَحِيضِ ۖ قُلْ هُوَ أَذًى فَٱعْتَزِلُوا۟ ٱلنِّسَآءَ فِى ٱلْمَحِيضِ ۖ وَلَا تَقْرَبُوهُنَّ
حَتَّىٰ يَطْهُرْنَ ۖ فَإِذَا تَطَهَّرْنَ فَأْتُوهُنَّ مِنْ حَيْثُ أَمَرَكُمُ ٱللَّهُ ۚ إِنَّ ٱللَّهَ يُحِبُّ ٱلتَّوَّٰبِينَ
وَيُحِبُّ ٱلْمُتَطَهِّرِينَ ﴿٢٢٢﴾ ﴾ البقره (٢٢٢)

Homosexuality

Homosexuality received outstanding importance in the Holy Qurân. It is entirely condemned and declared as a sinful act :

5 - And remember Lut, behold, he said to his people : You do commit lewdness such as no peoplé in creation ever committed before you. Indeed you do approach men and cut off the highway.. .

- Al - Anqabut (28 - 29) -

﴿ وَلُوطًا إِذْ قَالَ لِقَوْمِهِۦٓ إِنَّكُمْ لَتَأْتُونَ ٱلْفَٰحِشَةَ مَا سَبَقَكُم بِهَا مِنْ أَحَدٍ مِّنَ
ٱلْعَٰلَمِينَ ﴿٢٨﴾ أَئِنَّكُمْ لَتَأْتُونَ ٱلرِّجَالَ وَتَقْطَعُونَ ٱلسَّبِيلَ ﴾
العنكبوت (٢٨ ـ ٢٩)

6 - And Lut (an apostle); he said to his people : Do you commit lewdness inspite that you see (you are aware of it)? You do approach men in your lusts rather than women; nay you are but a people grossly ignorant.

- Al - Naml (54 - 55) -

﴿ وَلُوطًا إِذْ قَالَ لِقَوْمِهِۦٓ أَتَأْتُونَ ٱلْفَٰحِشَةَ وَأَنتُمْ تُبْصِرُونَ ﴿٥٤﴾ أَئِنَّكُمْ لَتَأْتُونَ ٱلرِّجَالَ شَهْوَةً مِّن دُونِ ٱلنِّسَآءِ ۚ بَلْ أَنتُمْ قَوْمٌ تَجْهَلُونَ ﴿٥٥﴾ ﴾ النمل (٥٤ ـ ٥٥)

7 - And Lut, who said to his people : Do you commit lewdness such as no people in creation ever committed before you? You do practise your lusts with men in preference to women; indeed you are a people transgressing beyond bounds.

- Al - Aaraf (80 - 81) -

﴿ وَلُوطًا إِذْ قَالَ لِقَوْمِهِۦٓ أَتَأْتُونَ ٱلْفَٰحِشَةَ مَا سَبَقَكُم بِهَا مِنْ أَحَدٍ مِّنَ ٱلْعَٰلَمِينَ ﴿٨٠﴾ إِنَّكُمْ لَتَأْتُونَ ٱلرِّجَالَ شَهْوَةً مِّن دُونِ ٱلنِّسَآءِ ۚ بَلْ أَنتُمْ قَوْمٌ مُّسْرِفُونَ ﴿٨١﴾ ﴾
الاعراف (٨٠ ـ ٨١)

In a word, the above verses quoted in this chapter, are merely examples of some prinicples concerning basic science amongst the vast teachings and knowledge included in the Holy Qurân. The question arises, however, is that not evidence of the truthfulness of the verse which means :

... Nothing have we ignored (Or neglected) from the Book...

- Al - Anaam (38) -

﴿ مَّا فَرَّطْنَا فِى ٱلْكِتَٰبِ مِن شَىْءٍ ﴾ الانعام (٣٨)

3 - THE TWO BOOKS OF ALLAH

On The Integrity Of The Holy Qurân

By these two books is meant :

1 - The Book which we read and recite its verses. This is the Holy Qurân.

2 - The book in which we live and observe its wonders. This is the Universe.

Since the Universe is entirely a material structure, Allah used to send prophets. The last prophet, Muhammad, was supported by the Holy Qurân, as an Eternal Miracle, to be the guiding light of reason and understanding. It renders clear the various phases of intellectual and spiritual life.

Evidently, Allah created man to be in the best structure and provided him with the distinguishing reason that establishes man's superiority above other creatures. Allah also gave man the abilities to express himself and bestowed upon him the faculty of speech :

Al-Rahman. Taught the Qurân. Created man. Offered him the ability to express himself.

- Al - Rahman (1 - 4) -

﴿ الرَّحْمَٰنُ ۝١ عَلَّمَ الْقُرْآنَ ۝٢ خَلَقَ الْإِنسَانَ ۝٣ عَلَّمَهُ الْبَيَانَ ۝٤ ﴾
الرحمن (١ - ٤)

When Allah spoke by the Holy Qurân, the Book we read, it was only natural that He referred to and mentioned several of His signs in the universe, His vivid Book. In this manner He talked about the heavens, the sky and atmosphere, the sun and

the moon, water, winds, clouds, day and night..., in the manner partially described in the present series of books.

Allah offered us life, made us dwell the earth, and provided us with a gaseous roof to protect us from the deadly hazards of space.

In the age of Science man began to travel through the space and did reach the moon.

Naturally, this step will be followed by others towards the planets. Amazingly enough, the Holy Qurân also mentions the possibility of travelling through space when Allah offers man the ability and power acquired by scientific progress. Allah says what means :

O company of jin and men, if you have the power to penetrate through the diameters of the heavens and the earth, then do penetrate; you will never penetrate save with authority and might.

- Al - Rahman (33) -

﴿ يَٰمَعْشَرَ ٱلْجِنِّ وَٱلْإِنسِ إِنِ ٱسْتَطَعْتُمْ أَن تَنفُذُوا۟ مِنْ أَقْطَارِ ٱلسَّمَٰوَٰتِ وَٱلْأَرْضِ فَٱنفُذُوا۟ ۚ لَا تَنفُذُونَ إِلَّا بِسُلْطَٰنٍ ﴿٣٣﴾ ﴾ الرحمن (٣٣)

With respect to us, the lowest sky is the earth's atmosphere where meteors burn by the excessive heat produced by friction with the air molecules. In this manner, meteors appear like lamps decorating the lowest sky :

We did decorate the lowest sky with lamps.... .

- Al - Mulk (5) -

﴿ وَلَقَدْ زَيَّنَّا ٱلسَّمَآءَ ٱلدُّنْيَا بِمَصَٰبِيحَ ﴾ الملك (٥)

Evidently, however, the Holy Qurân mentions the various phenomena of nature and urges mankind to contemplate and study them. The Holy Qurân, being the eternal message of Allah to mankind for guidance, it makes it clear that our studies in science should not be merely for the sake of understanding the material universe, but also a means of recognizing Allah, the Creator of the universe, and thus deepening our faith as believers.

The Holy Qurân aims at supplication to Allah in order that He may teach us and increase our knowledge* :

.... And say (asking Allah) :

O my Master, I beg for increasing my knowledge.

- Taha (114) -

﴿ وَقُل رَّبِّ زِدْنِي عِلْمًا ﴿١١٤﴾ ﴾ طه (١١٤)

Amongst the outstanding requests frequently demanded by the Holy Qurân from mankind are : to observe, ponder, and use our minds. In doing so with earnest honesty, man can be brought to full realization of the Creator.

Muslims believe that the Holy Revelation of the Qurân is the words of Allah. The extraordinary supreme and supernatural literary elegance and fluency, together with the artistic rhetoric dimensions of the Holy Qurân were extra-reasons that promoted

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*(1) By observing and studying Allah's signs in the Universe.

(2) However, some cosmic phenomena whose apparent features differ from their actual status, such as the shape of the earth, are not directly, but indirectly mentioned by the Holy Qurân, mainly to avoid being denied and attacked by ignorant peoples notably during the time of revelation.

early Muslims to memorize, scribe and intemately preserve the text of the Holy Qurân. Even the unbelievers are invited in the Holy Qurân to contemplate over its various verses that mean:

1 - Do they not then earnestly seek to understand the Qurân, or are their hearts locked up by them?.

- Muhammad (24) -

﴿ أَفَلَا يَتَدَبَّرُونَ ٱلْقُرْءَانَ أَمْ عَلَىٰ قُلُوبٍ أَقْفَالُهَآ ٢٤ ﴾ محمد (٢٤)

2 - Here is a Book which We have sent down to you full of blessings that they may motivate on its signs and that people of understanding may receive admonition.

- Sad (29) -

﴿ كِتَٰبٌ أَنزَلْنَٰهُ إِلَيْكَ مُبَٰرَكٌ لِّيَدَّبَّرُوٓا۟ ءَايَٰتِهِۦ وَلِيَتَذَكَّرَ أُو۟لُوا۟ ٱلْأَلْبَٰبِ ٢٩ ﴾
ص (٢٩)

Since the Holy Qurân's teachings are not restricted to a specific age of time or people, the treasures of its unlimited unexhaustible dimensions are continuously realized as time marches on, in eternal reality, vitality and freshness.

NO FLAWS IN THE UNIVERSE

There is no reason, whatever, to assume that the universe has several creators. This is evident notably from the fact that the laws of nature and processes of creation are obeyed and observed valid everywhere :

1 - No want of proportion will there be in the creation of Al - Rahman...

- Al - Mulk (3) -

﴿ مَّا تَرَىٰ فِي خَلْقِ ٱلرَّحْمَٰنِ مِن تَفَٰوُتٍ ﴾ الملك (٣)

2 - ... Seest thou any flaw? .

- Al - Mulk (3) -

﴿ هَلْ تَرَىٰ مِن فُطُورٍ ﴾ الملك (٣)

3 - I call them not to witness the creation of the heavens and the earth nor even their own creation....

- Al - Kahf (51) -

﴿ مَّآ أَشْهَدتُّهُمْ خَلْقَ ٱلسَّمَٰوَٰتِ وَٱلْأَرْضِ وَلَا خَلْقَ أَنفُسِهِمْ ﴾
الكهف (٥١)

Also, there is no reason, whatever, to assume that the creator does not differ from creation in all respects. We read in the Holy Qurân what means .

4 - Say : He is Allah the One and the Only .

- Al - Ikhlas (1) -

﴿ قُلْ هُوَ ٱللَّهُ أَحَدٌ ۝١ ﴾

5 - Allah the Eternal Absolute .

- Al - Ikhlas (2) -

﴿ ٱللَّهُ ٱلصَّمَدُ ۝٢ ﴾ الاخلاص (٢)

6 - He begetteth not nor is He begotten.

- Al - Ikhlas (3) -

﴿ لَمْ يَلِدْ وَلَمْ يُولَدْ ۝٣ ﴾ الاخلاص (٣)

7 - And He had entirely none to Him.

- Al - Ikhlas (4) -

﴿ وَلَمْ يَكُن لَّهُۥ كُفُوًا أَحَدٌۢ ۝٤ ﴾ الاخلاص (٤)

We also read the following names of Allah in the Holy Qurân :

1 - THE OWNER OF SOVEREIGNTY

Everything belongs to Him : Kingdom of Heavens and the Earth and all that exists inbetween. He offers life to every living being, or takes it away as He disposes. His Sovereignty inspires His supremacy and His Omnipotence over all.

2 - THE ABSOLUTE

No relation, whatever, exists between His entity and other creatures and beings. He is consecrated, not for the sake of wantage regarding needs and necessities.

4 - WHAT MODERN CIVILIZATION MISSED AS A RESULT OF THE DEGENERATION OF THE MUSLIM WORLD

At this stage one can realize that science is the message of Islam. The Holy Qurân describes with scientific precision matters pertaining to the universe. It also urges Muslims to take interest in science. In this manner many famous Muslim Scientists arose during the so-called middle ages or even dark ages. The Holy Book says what means :

And say (asking Allah) :

O my Master, I beg for increasing my knowledge.

- Taha (114) -

﴿ وَقُل رَّبِّ زِدْنِي عِلْمًا ﴾ طه (١١٤)

Contrary to Islamic teachings, modern civilization began in Europe by entire separation of science from religion. In this manner modern civilization had nothing to do with faith, and morals and thus became entirely materialistic. This fact, however, leads to wide-spread infidelity.

Another outstanding characteristic of Islam is that it is also the true message of equality between nations and tribes, liberty and justice. In the Muslim world, Muslims had no colonies. The Holy Book says clearly what means :

O mankind : We created you from a single (pair) of a male and a female and made you into nations and tribes that you may

know each other. Verily the most honoured of you in the sight of Allah is he who is the most righteous of you...

- Al - Hujurat (13) -

﴿ يَٰٓأَيُّهَا ٱلنَّاسُ إِنَّا خَلَقۡنَٰكُم مِّن ذَكَرٖ وَأُنثَىٰ وَجَعَلۡنَٰكُمۡ شُعُوبٗا وَقَبَآئِلَ لِتَعَارَفُوٓاْۚ
إِنَّ أَكۡرَمَكُمۡ عِندَ ٱللَّهِ أَتۡقَىٰكُمۡۚ ﴾ الحجرات (١٣)

Islam also injects the character of dignity without being proud, of contentment without being lazy, of confidence without conceit, of order without tyranny, and of freedom without corruptions, notably family corruption. With such dignified behaviour, the Egyptians readily became Muslims shortly after the invasion by the Muslim Arabs. Such behaviour never happened with the invasion of the Europeans!

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